PTO/SB/21 (09-04) Approved for use through 07/31/2005. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number Application Number 10/797,343 TRANSMITTAL Filing Date March 10, 2004 First Named Inventor **FORM** Robert Dobbs Art Unit **Examiner Name** (to be used for all correspondence after initial filing) Attorney Docket Number

Total Number of Pages in This Submission

the date shown below:

Signature

498P001

	ENCLOSURES (Check all that apply)									
	Fee Trans	smittal Form		Drawing(s)			After Allowance Communication to TC			
	☐ F€	ee Attached		Licensing-related Papers			Appeal Communication to Board of Appeals and Interferences			
	Amendment/Reply After Final Affidavits/declaration(s)  Extension of Time Request Express Abandonment Request Information Disclosure Statement  Certified Copy of Priority Document(s) Reply to Missing Parts/ Incomplete Application Reply to Missing Parts under 37 CFR 1.52 or 1.53		Ren	Petition Petition to Convert to a Provisional Application Power of Attorney, Revocation Change of Correspondence Address Terminal Disclaimer Request for Refund CD, Number of CD(s) Landscape Table on CD  Remarks		(4) c	Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  Proprietary Information  Status Letter Other Enclosure(s) (please Identify below):  Copies of three (3) supporting Articles; four (4) cited foreign patent abstracts and mailing postcard			
	<u>-</u>	SIGNA	TURE	OF APPLICANT, ATT	ORNEY. C	R AG	ENT			
Firm N	lame	Hancock & Estabrook			,					
Signature / // // O		1	$\mathcal{H}$							
Printe	d name	Christopher R. Pastel								
Date		November 19, 2004			Reg. No.	37,69	4			
	CERTIFICATE OF TRANSMISSION/MAILING									

Carolyn R. Parolin Date November 19, 2004 Typed or printed name This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Under the Paper

Substitute for form 1449/PTO

Sheet\_

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known					
Application Number	10/797,343				
Filing Date	March 10, 2004				
First Named Inventor	Robert Dobbs				
Art Unit					
Examiner Name					
Attorney Docket Number	498P001				

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	-	Number-Kind Code <sup>2 (I known)</sup>	04/40/05	12 - 13 - 13	1 iguies / ppear
	A	<sup>US-</sup> 5,407,464	04/18/95	Kaliski	
	В	<sup>US-</sup> 5,704,556	01/06/98	McLaughlin	
	С	<sup>US-</sup> 2,581,414	01/08/52	Hochberg	
	D	<sup>US-</sup> 5,478,705	12/26/95	Czekai, et al.	
	E	<sup>US-</sup> 5,518,187	05/21/96	Bruno, et al.	
	F	<sup>US-</sup> 3,690,962	09/12/72	Rudy	
	G	<sup>US-</sup> 3,737,289	06/05/73	Rudy	
	Н	<sup>US-</sup> 3,779,745	12/18/73	Rudy	
	1	<sup>US-</sup> 4,066,451	01/03/78	Rudy	
-	J	<sup>US-</sup> 6,520,837	02/18/03	Weichert	
	К	<sup>US-</sup> 5,033,682	07/23/91	Braun	
	L	<sup>US-</sup> 6,387,152	05/14/02	Klassen et al.	
	М	<sup>US-</sup> 6,627,104	09/30/03	Wang et al.	
	N	<sup>US-</sup> 6,017,504	01/25/00	Kaliaguine et al.	
	0	<sup>US-</sup> 6,152,982	11/28/00	Froes et al.	
	Р	US- 6,403,257	06/11/02	Christian et al.	
	Q	<sup>US-</sup> 6,231,636	05/15/01	Froes	
	R	<sup>US-</sup> 4,275,026	06/23/81	Hazel et al.	
	S	<sup>US-</sup> 5,034,069	07/23/91	Farge et al.	

Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
		Country Code <sup>3 -</sup> Number <sup>4 -</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T <sup>6</sup>
	Т	JP 4293557	10/19/92	Kitagaki		
	U	JP 8276364	10/22/96	Toyokura		
· <u></u>	V	JP 2001030175	02/06/2001	Ueno		
	W	JP 200202264023	09/18/2002	Une		

Examiner	Date
Signature	Considered

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND** TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
o a collection of information unless it contains a valid OMB control number.

Sub	stitute for form 1449/PTO	)		Complete if Known			
-				Application Number	10/797,343		
IN	IEODMATIO	N DI	SCLOSURE	Filing Date	March 10, 2004		
-	· -	-	=	First Named Inventor	Robert Dobbs		
S	TATEMENT	BY	APPLICANT	Art Unit			
	(Use as many s	heets as	s necessary)	Examiner Name			
Sheet	2	of	3	Attorney Docket Number	498P001		

	-		U. S. PATENT	DOCUMENTS	
Examiner Cite Initials* No.1		Document Number  Number-Kind Code <sup>2 (# known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	X	US- 5,246,056	09/21/93	Lomax et al.	
	Y	<sup>US-</sup> 5,261,477	11/16/93	Brunet et al.	
	Z	<sup>US-</sup> 5,310,605	05/10/94	Baldoni, II et al.	
	AA	<sup>US-</sup> 5,401,694	03/28/95	Gesing et al.	
	AB	<sup>US-</sup> 5,918,103	06/29/99	Kobayashi et al.	
	AC	<sup>US-</sup> 5,993,506	11/30/99	Kobayashi et al.	
	AD	<sup>US-</sup> 5,500,289	03/19/96	Gavish	
	AE	<sup>US-</sup> 6,036,099	03/14/00	Zhao et al.	
	AF	<sup>US-</sup> 6,254,658	07/03/01	Taniuchi et al.	
	AG	<sup>US-</sup> 6,571,493	06/03/03	Amano et al.	
	AH	<sup>US-</sup> 6,669,747	12/30/03	Salman	
		US-			

FOREIGN PATENT DOCUMENTS									
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages				
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	1			
						L			
						Г			

Examiner	Date	
Signature	Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Panerwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitut	Substitute for form 1449/PTO			Complete if Known		
Oubstitut	10 10 10 111 1440/1 10			Application Number	10/797,343	
INFO	ORMATION	DIS	CLOSURE	Filing Date	March 10, 2004	
STATEMENT BY APPLICANT				First Named Inventor	Robert Dobbs	
				Art Unit		
(Use as many sheets as necessary)			ecessary)	Examiner Name		
Sheet	3	of	3	Attorney Docket Number	498P001	

		NON PATENT LITERATURE DOCU	JMENTS					
Examiner Initials*								
	[022] V. N. Eremenko, et al, "Investigations of alloys or the ternary systems W-HfC-C and VZrC-C at subsolidus temperatures," Dokl.Akad. Nauk. Ukr. SSSR, Ser. A No. 1, 83-88							
	AJ L.V. Artyukh, et al, "Physicochemical reactions of tungsten carbide with hafnium carbide," Izv. Akad. Nauk SSSR, Neorg. Mater., No. 4, 634-637 (1976)							
	T. Ya. Velikanova, et al, "Effect of alloying on the structure and properties of cast WC1-x Materials," Poroshkovaya Metallurgiya, No. 2 (218), 53-58, (1981)							
Examiner	T		Date					

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the application forms to the USPTO. The will vary depending upon the individual case. Any comments on the application forms to the USPTO. The will vary depending upon the individual case. amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.